

**SUZUKI**

*VL 125*

**SERVICE MANUAL**



99500-31150-01E

# FOREWORD

*This manual contains an introductory description on the SUZUKI VL125 and procedures for its inspection/service and overhaul of its main components. Other information considered as generally known is not included.*

*Read the GENERAL INFORMATION section to familiarize yourself with the motorcycle and its maintenance. Use this section as well as other sections to use as a guide for proper inspection and service. This manual will help you know the motorcycle better so that you can assure your customers of fast and reliable service.*

- \* This manual has been prepared on the basis of the latest specifications at the time of publication. If modifications have been made since then, differences may exist between the content of this manual and the actual motorcycle.*
- \* Illustrations in this manual are used to show the basic principles of operation and work procedures. They may not represent the actual motorcycle exactly in detail.*
- \* This manual is written for persons who have enough knowledge, skills and tools, including special tools, for servicing SUZUKI motorcycles. If you do not have the proper knowledge and tools, ask your authorized SUZUKI motorcycle dealer to help you.*

## **⚠ WARNING**

**Inexperienced mechanics or mechanics without the proper tools and equipment may not be able to properly perform the services described in this manual. Improper repair may result in injury to the mechanic and may render the motorcycle unsafe for the rider and passenger.**

## **SUZUKI MOTOR CORPORATION**

*Motorcycle Service Department*

# GROUP INDEX

**GENERAL INFORMATION**

**1**

**PERIODIC MAINTENANCE**

**2**

**ENGINE**

**3**

**FUEL AND LUBRICATION  
SYSTEM**

**4**

**CHASSIS**

**5**

**ELECTRICAL SYSTEM**

**6**

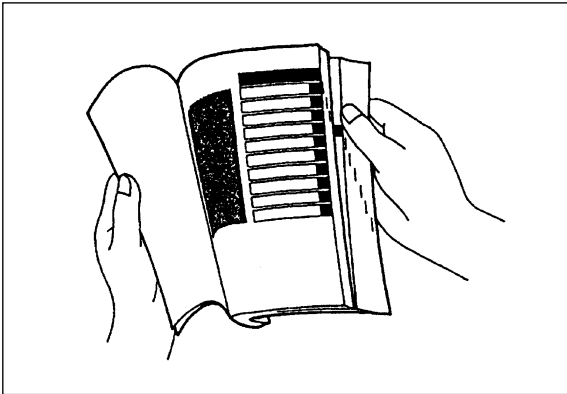
**SERVICING INFORMATION**

**7**

# HOW TO USE THIS MANUAL

## TO LOCATE WHAT YOU ARE LOOKING FOR:

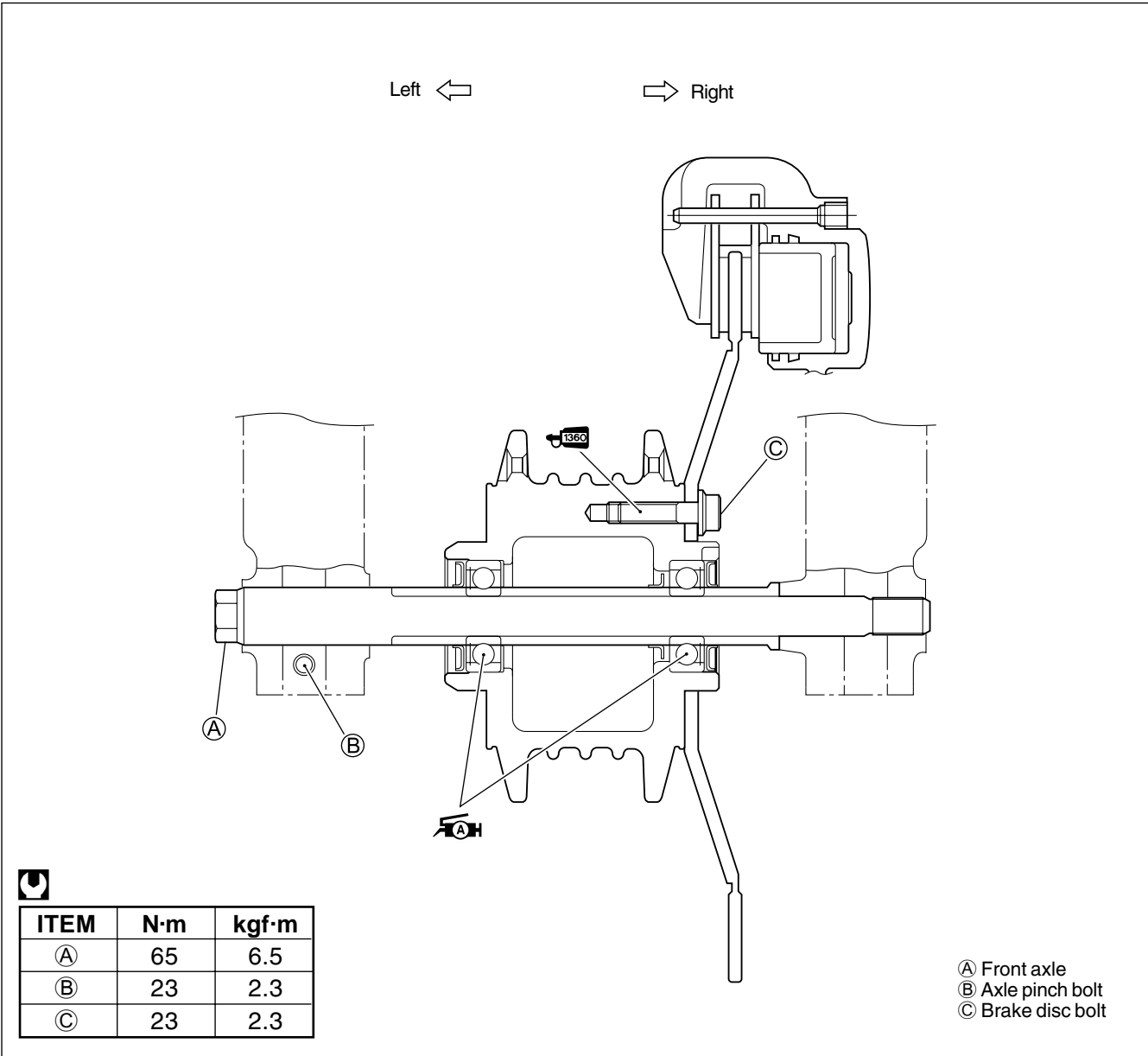
- 1. The text of this manual is divided into sections.
- 2. The section titles are listed in the GROUP INDEX.
- 3. Holding the manual as shown at the right will allow you to find the first page of the section easily.
- 4. The contents are listed on the first page of each section to help find the item and page you need.



## COMPONENT PARTS AND WORK TO BE DONE






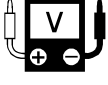





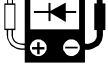




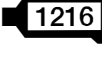



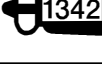
Under the name of each system or unit, is its exploded view. Work instructions and other service information such as the tightening torque, lubricating points and locking agent points, are provided.

Example: Front wheel



## SYMBOL

Listed in the table below are the symbols indicating instructions and other information necessary for servicing. The meaning of each symbol is also included in the table.

SYMBOL	DEFINITION	SYMBOL	DEFINITION
	Torque control required Data beside it indicates specified torque.		Apply THREAD LOCK SUPER "1360". 99000-32130
	Apply oil. Use engine oil unless otherwise specified.		Apply or use brake fluid.
	Apply *Molybdenum oil solution (Mixture of engine oil and SUZUKI MOLY PASTE in a ratio of 1:1)		Measure in voltage range.
	Apply SUZUKI SUPER GREASE "A". 99000-25010		Measure in resistance range.
	Apply SUZUKI SILICONE GREASE. 99000-25100		Measure in current range.
	Apply SUZUKI MOLY PASTE. 99000-25140		Measure in diode test range.
	Apply THERMO GREASE "G". 99000-25300		Measure in continuity test range.
	Apply SUZUKI BOND "1215". 99000-31110		Use special tool.
	Apply SUZUKI BOND "1216". 99000-31160		Use fork oil. 99000-99044-10G
	Apply THREAD LOCK SUPER "1303". 99000-32030		Indication of service data.
	Apply THREAD LOCK "1342". 99000-32050		

\* How to make Molybdenum oil : Pour an engine oil and SUZUKI MOLY PASTE in a ratio of 1:1 by volume into such as oiler, and stir well.

# GENERAL INFORMATION

1

## CONTENTS

<b>WARNING/CAUTION/NOTE .....</b>	<b>1- 2</b>
<b>GENERAL PRECAUTIONS .....</b>	<b>1- 2</b>
<b>SUZUKI VL125Y (2000-MODEL) .....</b>	<b>1- 4</b>
<b>SERIAL NUMBER LOCATION .....</b>	<b>1- 4</b>
<b>FUEL AND OIL RECOMMENDATION .....</b>	<b>1- 5</b>
<b>FUEL .....</b>	<b>1- 5</b>
<b>ENGINE OIL .....</b>	<b>1- 5</b>
<b>BRAKE FLUID .....</b>	<b>1- 5</b>
<b>FRONT FORK OIL .....</b>	<b>1- 5</b>
<b>BREAK-IN PROCEDURES .....</b>	<b>1- 5</b>
<b>CYLINDER IDENTIFICATION .....</b>	<b>1- 6</b>
<b>INFORMATION LABELS .....</b>	<b>1- 6</b>
<b>SPECIFICATIONS .....</b>	<b>1- 7</b>
<b>COUNTRY AND AREA CODES .....</b>	<b>1- 9</b>

## WARNING/CAUTION/NOTE

Please read this manual and follow its instructions carefully. To emphasize special information, the symbol and the words WARNING, CAUTION and NOTE have special meanings. Pay special attention to the messages highlighted by these signal words.

### **WARNING**

Indicates a potential hazard that could result in death or injury.

### **CAUTION**

Indicates a potential hazard that could result in motorcycle damage.

### *NOTE:*

*Indicates special information to make maintenance easier or instructions clearer.*

Please note, however, that the warnings and cautions contained in this manual cannot possibly cover all potential hazards relating to the servicing, or lack of servicing, of the motorcycle. In addition to the WARNINGS and CAUTIONS stated, you must use good judgement and basic mechanical safety principles. If you are unsure about how to perform a particular service operation, ask a more experienced mechanic for advice.

## GENERAL PRECAUTIONS

### **WARNING**

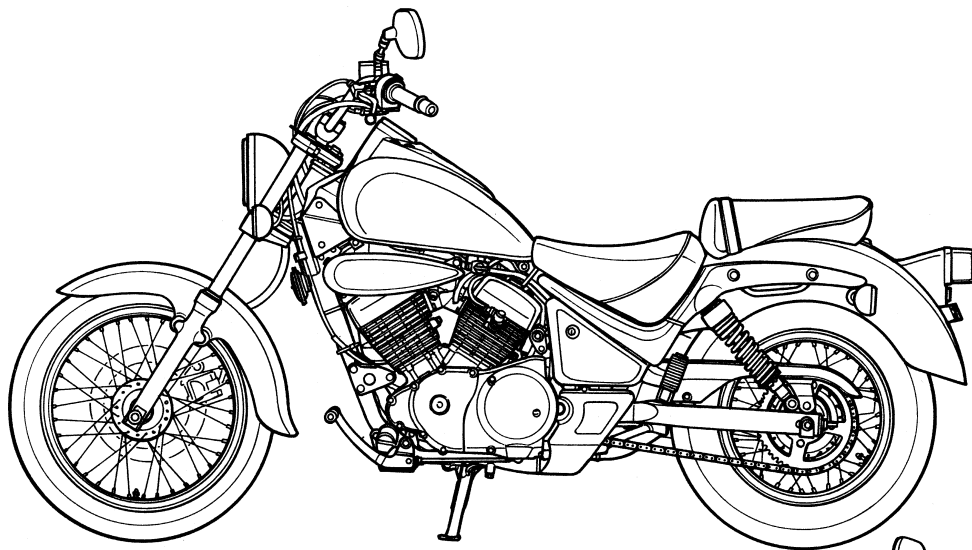
- \* Proper service and repair procedures are important for the safety of the service mechanic and the safety and reliability of the motorcycle.
- \* When 2 or more persons work together, pay attention to the safety of each other.
- \* When it is necessary to run the engine indoors, make sure that exhaust gas is forced outdoors.
- \* When working with toxic or flammable materials, make sure that the area you work in is well-ventilated and that you follow all of the material manufacturer's instructions.
- \* Never use gasoline as a cleaning solvent.
- \* To avoid getting burned, do not touch the engine, engine oil and exhaust system until they have cooled.
- \* After servicing the fuel, oil, exhaust or brake systems, check all lines and fittings related to the system for leaks.

**▲ CAUTION**

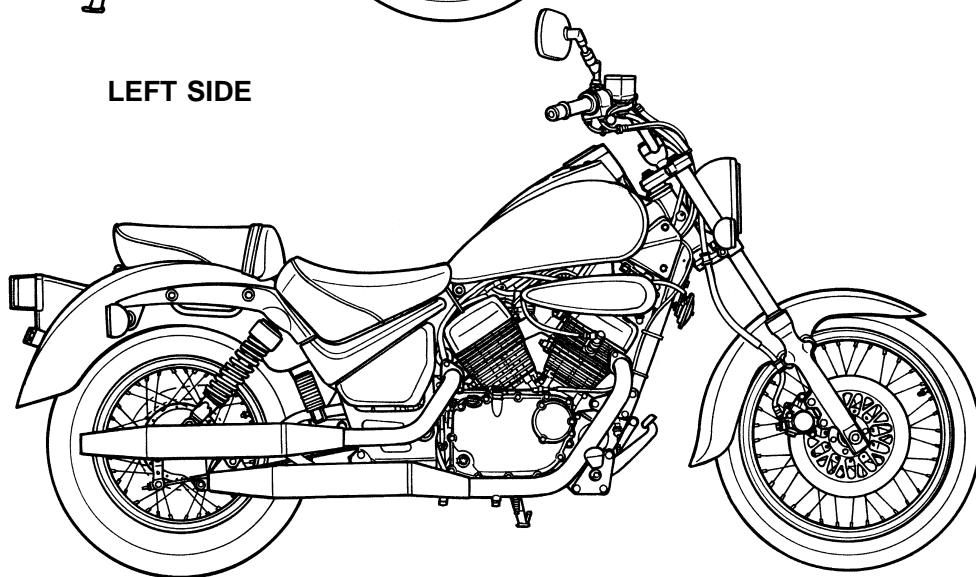
- \* If parts replacement is necessary, replace the parts with Suzuki Genuine Parts or their equivalent.
- \* When removing parts that are to be reused, keep them arranged in an orderly manner so that they may be reinstalled in the proper order and orientation.
- \* Be sure to use special tools when instructed.
- \* Make sure that all parts used in reassembly are clean. Lubricate them when specified.
- \* Use the specified lubricant, bond, or sealant.
- \* When removing the battery, disconnect the negative cable first and then the positive cable. When reconnecting the battery, connect the positive cable first and then the negative cable, and replace the terminal cover on the positive terminal.
- \* When performing service to electrical parts, if the service procedures not require use of battery power, disconnect the negative cable the battery.
- \* When tightening the cylinder head and case bolts and nuts, tighten the larger sizes first. Always tighten the bolts and nuts diagonally from the inside working out and to the specified tightening torque.
- \* Whenever you remove oil seals, gaskets, packing, O-rings, locking washers, self-locking nuts, cotter pins, circlips and certain other parts as specified, be sure to replace them with new ones. Also, before installing these new parts, be sure to remove any left over material from the mating surfaces.
- \* Never reuse a circlip. When installing a new circlip, take care not to expand the end gap larger than required to slip the circlip over the shaft. After installing a circlip, always ensure that it is completely seated in its groove and securely fitted.
- \* Use a torque wrench to tighten fasteners to the specified torque. Wipe off grease and oil if a thread is smeared with them.
- \* After reassembling, check parts for tightness and proper operation.

- \* To protect the environment, do not unlawfully dispose of used motor oil, engine coolant and other fluids: batteries, and tires.
- \* To protect Earth's natural resources, properly dispose of used motorcycle and parts.

## SUZUKI VL125Y (2000-MODEL)



LEFT SIDE

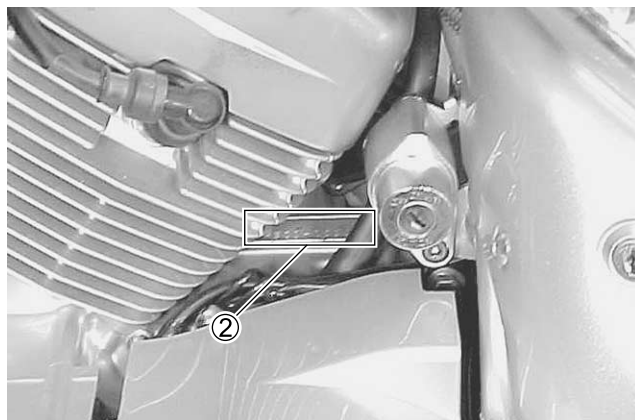


RIGHT SIDE

\*Difference between photograph and actual motorcycle depends on the markets.

## SERIAL NUMBER LOCATION

The frame serial number or V.I.N. (Vehicle Identification Number) ① is stamped on the right side of the frame tube. The engine serial number ② is located on the left side of the crankcase. These numbers are required especially for registering the machine and ordering spare parts.





## FUEL AND OIL RECOMMENDATION

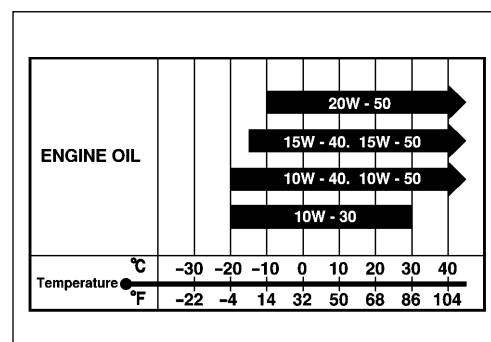
### FUEL

Gasoline used should be graded 91 octane (Research Method) or higher. Unleaded gasoline is recommended.

### ENGINE OIL

Use a premium quality 4-stroke motor oil to ensure longer service life of your motorcycle. Use only oils which are rated SF or SG under the API service classification.

The recommended viscosity is SAE 10W-40. If an SAE 10W-40 motor oil is not available, select an alternative according to the following chart.



### BRAKE FLUID

Specification and classification: DOT 4

#### ⚠ WARNING

Since the brake system of this motorcycle is filled with a glycol-based brake fluid by the manufacturer, do not use or mix different types of fluid such as silicone-based and petroleum-based fluid for refilling the system, otherwise serious damage will result.

Do not use any brake fluid taken from old or used or unsealed containers.

Never re-use brake fluid left over from a previous servicing, which has been stored for a long period.

### FRONT FORK OIL

Use fork oil #10.

## BREAK-IN PROCEDURES

During manufacture only the best possible materials are used and all machined parts are finished to a very high standard but it is still necessary to allow the moving parts to "BREAK-IN" before subjecting the engine to maximum stresses. The future performance and reliability of the engine depends on the care and restraint exercised during its early life. The general rules are as follows.

- Keep to these break-in procedures:

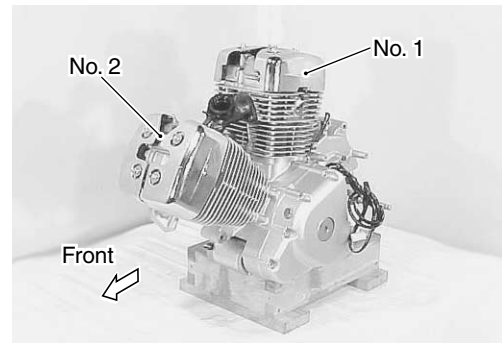
**Initial 800 km : Less than 1/2 throttle**

**Up to 1 600 km : Less than 3/4 throttle**

- Upon reaching an odometer reading of 1 600 km you can subject the motorcycle to full throttle operation.
- Do not maintain constant engine speed for an extended time period during any portion of the break-in. Try to vary the throttle position.

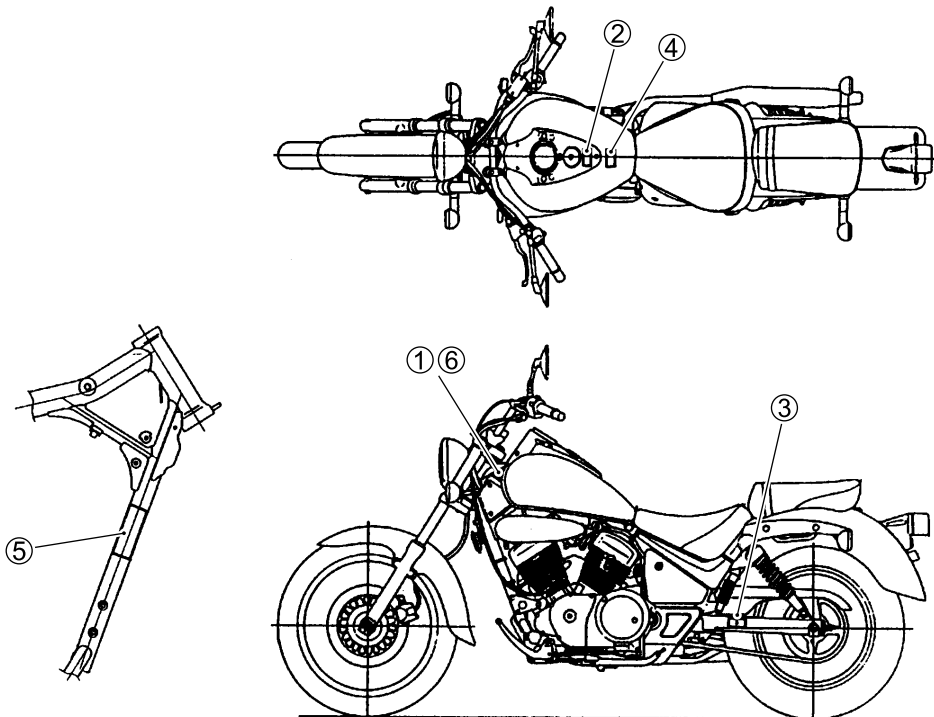
## CYLINDER IDENTIFICATION

The two cylinders of this engine are identified as No. 1 and No. 2 cylinder, as counted from rear to front (as viewed by the rider on the seat).



## INFORMATION LABELS

①	Noise label	For E-34
②	Fuel caution label	For E-02
③	Tire pressure label	
④	Warning safety label	
⑤	ID plate	
⑥	ID plate	For E-18



## SPECIFICATIONS

### DIMENSIONS AND DRY MASS

Overall length .....	2 240 mm
Overall width .....	880 mm
Overall height .....	1 110 mm
Wheelbase .....	1 520 mm
Ground clearance .....	150 mm
Seat height .....	685 mm
Dry mass .....	140 kg

### ENGINE

Type .....	Four-stroke, air-cooled, OHC, pent-roof, 65°V twin
Number of cylinders .....	2
Bore .....	44.0 mm
Stroke .....	40.9 mm
Displacement .....	124 cm <sup>3</sup>
Compression ratio .....	10.3 : 1
Carburetor .....	MIKUNI BDS26, single
Air cleaner .....	Polyurethane foam element
Starter system .....	Electric
Lubrication system .....	Wet sump

### TRANSMISSION

Clutch .....	Wet multi-plate type
Transmission .....	5-speed constant mesh
Gearshift pattern .....	1-down, 4-up
Primary reduction ratio .....	3.173 (73/23)
Secondary reduction ratio .....	4.000 (56/14)
Gear ratios, Low .....	2.636 (29/11)
2nd .....	1.647 (28/17)
3rd .....	1.217 (28/23)
4th .....	0.952 (20/21)
Top .....	0.818 (18/22)
Drive chain .....	RK428H0, 142 links

## ELECTRICAL

Ignition type .....	Electronic ignition (Transistorized)
Ignition timing .....	10° B.T.D.C. at 1 400 r/min
Spark plug .....	NGK CR8E or DENSO U24ESR-N
Battery .....	12 V 21.6 kC (6 Ah)/10 HR
Generator .....	Three-phase A.C. generator
Fuse .....	20 A
Headlight .....	12 V 60/55 W
Position light .....	12 V 4 W
Brake light/Taillight .....	12 V 21/5 W
Turn signal light .....	12 V 21 W
Speedometer light .....	12 V 1.7 W
Neutral indicator light .....	12 V 1.7W
Turn signal indicator light .....	12 V 1.7 W × 2
High beam indicator light .....	12 V 1.7 W

## CHASSIS

Front suspension .....	Telescopic, coil spring, oil damped
Rear suspension .....	Swingarm type, coil spring, oil damped, spring pre-load 5-way adjustable
Front fork stroke .....	120 mm
Rear wheel travel .....	90 mm
Steering angle .....	40° (right and left)
Caster .....	31° 42'
Trail .....	120 mm
Turning radius .....	2.72 m
Front brake .....	Disc brake
Rear brake .....	Drum brake
Front tire size .....	90/90-18 51P
Rear tire size .....	130/90-15M/C 66P

## CAPACITIES

Fuel tank, including reserve .....	12.0 L
reserve .....	3.0 L
Engine oil, oil change .....	1 800 ml
with filter change .....	1 900 ml
overhaul .....	2 100 ml
Front fork oil (each leg) .....	406 ml

Specifications are subject to change without notice.

## COUNTRY AND AREA CODES

The following codes stand for the applicable country(-ies) and area(-s).

CODE	COUNTRY or AREA
E-02	U.K.
E-04	France
E-17	Sweden, Finland (E-15), Norway (E-16), Denmark (E-26)
E-22	Germany
E-34	Italy, Belgium (E-21), Spain (E-53)
E-18	Switzerland, Austria (E-39)